

Optical networking for grid computing

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When using Grid computing, computationally intensive tasks can be delegated to remote computer systems, or a lack of storage capacity can be solved by using storage capacity on a remote location. Today, optical networking is becoming a key enable to design the next generation grid infrastructures. Two important optical networking classes can be distinguished: OCS (Optical Circuit Switching) networks make use of multiple wavelengths to offer extremely high bandwidths (typically required for large tasks, that require a large bandwidth) and OBS/OPS (Optical Burst Switched / Optical Packet Switched) networks which are more complex but support a finer granularity (typically necessary for smaller tasks of for instance residential users). In this paper we will discuss typical applications and give an overview of different approaches based on optical technologies. Introduction



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